

## TEST PLAN

---

**Title:** Radiation Dose Monitoring at NL02

**Author(s):** Charles Reece

**Date Submitted:** 14 May, 1996

**Revision Number:** Rev. 1, (14 May, 1996)

### Brief Purpose of Test

---

There is very limited data on actual radiation dose experienced by accelerator hardware during operations. Some components inside cryomodules may be subject to degradation with large accumulated doses. Also, rad environment of SEE rf module needs to be measured.

We want to measure doses at seven locations on NL02 during a variety of normal operating periods.

### Beam Conditions Required

---

Normal operations - exchange TLDs on NL02 during controlled access when there are non-disruptive opportunities.

### Time Required

---

< 30 minutes per change of TLDs

### Preferred Time of Test

---

none

### Staff Required to Execute the Test (including contact info)

---

Operators

### Controlled Access Requirements

---

Yes, to exchange sets of TLDs on NL02.

### Hardware and/or Software Changes Required

---

None

## Test and Setup Procedures

### PRELIMINARY SETUP STEPS

1. Sets of seven TLD holders are labeled and available in the control room.

### TEST PROCEDURE STEPS

1. *When there is opportunity for a short controlled access in the NL, collect a set of TLDs from the “TLDs for NL02” box. (One bag containing six individually labeled TLDs.) Use sets in alphabetical order.*
2. *Initially place and subsequently replace TLDs on NL02 cryomodule and the downstream SEE rf module in the places indicated in the Figure. Place the TLDs by number in the locations noted.*
3. *Make time entry on the new TLD Traveler sheet., and leave it next to TLD #1.*

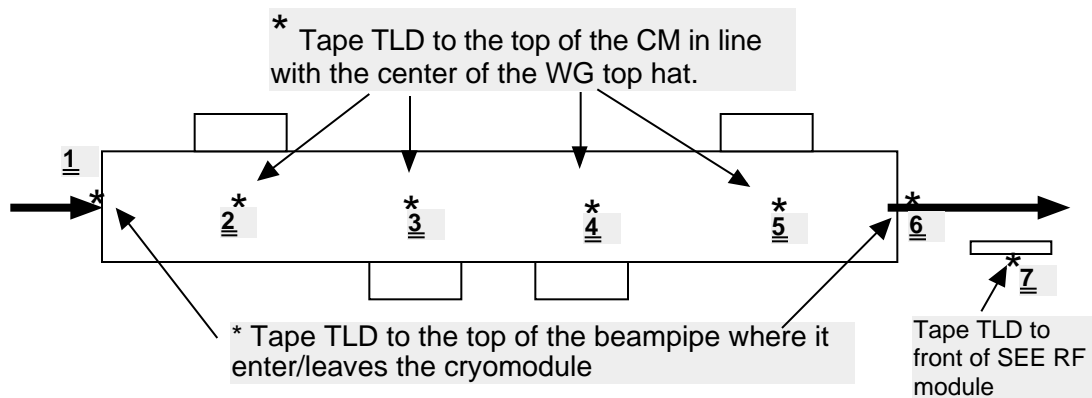


Table 1: TLDs for NL02 Cryomodule and SEE module

Set	Installation Date - time	Removal Date - time	Primary Program
<i>example</i>	<i>15 May, 03:45</i>	<i>15 May, 21:15</i>	<i>2-pass 50μA beam</i>
A			
B			
C			
D			
E			

4. *Place the retrieved TLDs and the Traveler for that set in the “TLDs to be read” box and record set numbers in the log. If it is immediately clear what the preceding program has been during the time the TLDs were in place, note that in the Traveler log.*

5. *C. Reece will retrieve TLDs and arrange for RadCon staff to read the accumulated dose. After reading, the TLD's can be reused.*

## **Test Results**

---